



State of Utah

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September 19, 2002

TO: Internal File

THRU: Karl R. Houskeeper, Sr. Reclamation Specialist/Team Lead

FROM:  Priscilla W. Burton, Sr. Reclamation Specialist/Soils

RE: South Portals, Genwal Resources, Inc., Crandall Canyon Mine, C/015/032-02A

SUMMARY:

Genwal Resources, Inc. proposes to add three portals along the south slope at the Crandall Canyon Mine. The area is on a steep hillside. To keep surface disturbance to a minimum, topsoil would be salvaged from the immediate vicinity of the portal cuts, 0.07 acres. The submittal indicates 110 cu yds of topsoil will be salvaged and stored for reclamation of the site, although double that figure is possible according to the consultant's report.

The Crandall Canyon Mine was given approval on June 25, 1997 to cover native soils with geotextile fabric, rather than salvage the topsoil prior to culverting the stream. During this previous activity, 1.10 acres of stream channel and 1.53 acres of steep slope were covered with geotextile fabric. The procedure was to cover the in-place topsoil with geotextile fabric and to separate the geotextile from the fill with a layer of different colored fill (marker soil). This procedure should be followed again with the south portal construction.

The current proposal is to cover additional acreage on the slope with geotextile fabric in areas to be covered with construction fill. The acreage to be buried under geotextile should be provided by the Permittee. An assurance of the non-acid/non-toxic forming nature of the fill should be provided. Also, an evaluation of the gravel pit for the presence of noxious weeds should be conducted by the County Weed Supervisor or a representative of the Utah Department of Agriculture.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

GENERAL CONTENTS

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

The Permittee has made adjustments to the acreage identified on page 2-10. In doing so, the Permittee forgot to re-calculate the subtotal sum for Areas Not Topsoiled on page 2-10.

Findings:

The information provided is not completely accurate. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-150, Correct the subtotal sum for Areas Not Topsoiled on page 2-10.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

Appendix 2-3B contains earlier surveys of the stream soils and south slope affected by the culvert installation (see Finalta.cul). Appendix 2-6 contains the survey conducted on August 18, 1998 by Mr. James Nyenhuis, ARCPACS Certification #2753, of the soils to be affected by the south portal development. The soils are in the Map Unit E, Lucky Star loam, 40 – 80% slopes. The soil is described as a loamy-skeletal, mixed Ustic Haplocryoll with a mollic epipedon surface layer seven inches thick overlain by a two-inch Oe horizon of semi-decomposed needles and twigs.

Findings

The information provided is not complete. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-222.100, The soil survey map referred to on page 5 of Appendix 2-6 could not be found.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

The proposed Belt Portal is located in the coal storage area where topsoil has previously been salvaged and stored. The Intake and Fan Portals are located in undisturbed ground and the Permittee will salvage one foot of surface soil prior to construction of the portal canopies. In all, 110 cu yds of topsoil will be salvaged and stored in the #4 Topsoil pile at the mouth of the canyon.

The area of topsoil removal is shown on Figure 8B. This area corresponds with Map Unit E described in Appendix 2-6 by Mr. James Nyenhuis, ARCPACS certification 2753. Mr. Nyenhuis indicates that the upper two feet of the soil is "entirely suitable for salvage...". Therefore, the Permittee should plan for twice the depth of removal presently described. The Permittee should plan for 220 cu yds of topsoil to be salvaged and stored in the #4 Topsoil pile, and for a replacement depth of 16 inches (page 2-10, MRP).

Amendment Number 2 for Special-Use Authorization issued 07/29/97 by the U.S. Department of Agriculture Forest Service allows for the storage of approximately 3,000 cu yds of soil on 0.6 acres. The #4 topsoil pile was designed to accommodate 5,000 cu yds of soil with 3h:1v side slopes (page 2-8, MRP). Topsoil pile #4 currently holds approximately 4,756 cu yds. As Built Plates 2-5, 2-5A, and 2-5B will be required after topsoil salvage from the south portal construction is complete.

The Crandall Canyon Mine obtained approval on June 25, 1997 to bury topsoil in-place beneath construction fill separated from the fill by a layer of different colored fill (marker soil) and geotextile fabric. The acreage receiving such treatment is not disclosed in the MRP. The type of geotextile fabric is not disclosed in the MRP.

This submittal also describes covering the topsoil on the steep south slopes with geotextile prior to construction of a ramp up to the site of the portals, 17 feet above the existing storage yard pad. A cross-section showing the procedure is shown in Figure 5-11. The area to be covered with geotextile during this phase of construction is not disclosed.

The construction fill will be derived from a mix of materials from the portal excavations and imported fill from Nielson Construction commercial borrow pit located in Huntington Canyon (page 2-6a). The quality of the fill is not provided. The quantity of imported fill required is not disclosed. An assurance of non-toxicity, non-acidity of the fill derived from the portal excavation and the Nielson Construction site is required to protect the buried in-place topsoil.

The gravel pit and hillside to be used as a source of fill was evaluated for the presence of noxious weeds by the Utah Department of Agriculture in May of 1997. The noxious weed *Agropyron repens* (l.) Beauv, quackgrass, was noted on the site, but the Agriculture Department representative, Carl Bott, noted that under Section R68-9-4, Number 8 a of the Utah Noxious Weed Act, "contaminated soil may be used for restrictive, non-planting purposes upon permission and under the direction of the County Weed Supervisor or a representative of the Utah Department of Agriculture." The condition of the gravel pit should be re-evaluated for noxious weeds by the County Weed Supervisor or a representative of the Utah Department of Agriculture before use.

The submittal indicates on page 2-6b that, "All topsoil removal, salvage and storage will be over-seen, directed and monitored by an independent soil scientist approved by the Division. A report of the topsoil salvage operation will be prepared by the soil scientist and added to the MRP upon completion...".

Findings:

The information provided does not meet the minimum requirements of the Regulations for topsoil removal and storage. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-231.400, (1) The plan must describe the current and proposed acreage of topsoil protected by geotextile and describe the type of geotextile used. The acreage could be shown on a figure. (2) Laboratory testing of the fill derived from the portal excavation and the Nielson Construction site is required to provide an assurance of non-toxicity, non-acidity for protection of the buried in-place topsoil. (3) The condition of the gravel pit should be re-evaluated for noxious weeds by the County Weed Supervisor or a representative of the Utah Department of Agriculture before use. (4) The quantity of imported fill must be disclosed with as-built plans.

R645-301-232.100, Based upon the information supplied in Appendix 2-6, the Permittee should plan for 220 cu yds of topsoil salvaged and stored in the #4 Topsoil pile (page 2-11) and a replacement depth of 16 inches for the south slope portals (page 2-10).

R645-301-231.400, The submittal must indicate that As-Built maps of Topsoil Pile #4, Plates 2-5, 2-5A, and 2-5B, will be provided after soil salvage for construction of the south portals is completed.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The total disturbed area of the mine site is 14.18 acres of which 6.37 acres will receive twelve inches of topsoil at final reclamation (Page 2-10 and Appendix 5-22, page 5). An additional 8.63 acres will not receive topsoil during final reclamation as outlined in Section 2.42 of the submittal.

The south portal pocket cuts will be reclaimed in accordance with the MRP procedures described for the portal area (Appendix 5-22). The south portal cuts will be filled and receive one foot of topsoil replacement.

Soils beneath the ramp will be uncovered. Reclamation will follow the approved plan provided in Appendix 5-22.

Findings:

The information provided meets the minimum requirements of the regulations.

RECOMMENDATION:

The Division has previously approved the in-place storage of native soils on the steep slopes of the south side of Crandall Creek. The Permittee should provide the Division with information on the nature of the fill to be placed over the in-place native soils. Information requested includes the chemical characteristics of the fill; the quantity of the fill; the nature of the geotextile fabric; an evaluation of the presence of noxious weeds on the fill; as well as the acreage of the area to be covered with geotextile and protected in-place. This information, as well as the soil survey map of the area and a commitment to provide As-Builts of Plates 2-5, 2-5A, 2-5B, should be received prior to approval.

The Permittee should be advised that based upon the information supplied in Appendix 2-6, twice the planned volume of topsoil could be salvaged from the portal excavations and stored in the #4 Topsoil.